# FIRE AND RESCUE SERVICE Departmental Program Structure and Outcome Measures

#### VISION:

The Vision of the Montgomery County Fire and Rescue Service is to keep our communities safe and healthy by providing comprehensive and effective life safety and property protection services through diverse partnerships.

#### MISSION

The Mission of the combined and integrated Montgomery County Fire and Rescue Service is to protect life, property, and the environment by providing

- · Comprehensive emergency medical, fire, and disaster prevention/educational programs, and
- Effective and efficient readiness, response, and emergency management

through skilled, motivated, and compassionate service providers.

#### **GUIDING PRINCIPLES:**

Montgomery County's Fire and Rescue Service providers will:

- · Serve with integrity and mutual respect
- · Recognize the importance of diversity in our workforce and communities
- · Promote the efficient and effective utilization of our resources
- · Deliver services to our customers with impartiality and excellence
- Promote the highest standards of safety and welfare
- Be responsible for the honor of our profession and the public service we provide
- Maintain and promote open communication, creativity, and competence
- . Be accountable and ethical
- · Continuously improve public confidence and trust

#### PROGRAMS:

- Operational Fire and Rescue Readiness and Response
- Special Operations
- · Wellness, Safety, and Training
- Fire and Rescue Logistics Services
- Volunteer Fire and Rescue Services
- Fire and Rescue Prevention and Public Education
- Administration

#### **FY05 RESOURCES:**

- 33 fire-rescue stations
- 930 IECS (Integrated Emergency Command Structure)-certified career fire fighter-rescuers
- 665 IECS-certified volunteer fire fighter-rescuers
- 31 front-line<sup>a</sup> engines, engine-tankers, and quints<sup>b</sup>
- 46 front-line emergency medical services units (29 ambulances and 17 medic units)
- 14 front-line aerial units (ladder trucks and aerial towers)
- 9 front-line heavy rescue squads
- 6 front-line tankers
- 13 front-line brush units
- 9 front-line rescue boats
- Hazmat, bomb squad, water rescue, and collapse rescue specialty teams
- · Command, air, canteen, utility, decontamination, and firefighter rehabilitation units

## **KEY SERVICE FACTORS (CY2004):**

- 98,620 fire-rescue incidents; approximately 78% involved emergency medical services
- 50,407 patients served; 44,142 transported to hospitals
- 203,743 individual unit responses an average of 557 per day
- 27 units with more than 2,500 responses per year (20 emergency medical services units, 6 engines, 1 rescue squad)
- A fire-rescue unit was dispatched every 2.6 minutes (on average)

DEPARTMENTAL OUTCOMES	FY02 ACTUAL	FY03 ACTUAL	FY04 ACTUAL	FY05 BUDGET	FY05 ACTUAL	FY06 APPROVED
Percentage of structure fires with flames confined to room of origin	76.8	78.8	75.1	78.8	<sup>d</sup> 52.8	77.3
Number of civilian fire deaths in structures	13	6	5	0	7	0
Total fire loss (\$millions)	23.1	25.0	44.2	34.0	°48.6	34.5
Percentage of successful defibrillations (national average: 5%)	23.2	25.6	31.3	32.2	33.3	35.2
Percentage of successful intubations	73.5	76.5	70.0	67.4	72.4	65.4
Percentage of emergency phone calls processed within 1 minute <sup>c</sup>	NA	52.0	48.0	65	1.0	5
Total number of training hours provided by Training Academy	167,000	167,000	81,829	114,400	102,341	125,050

#### Notes:

<sup>a</sup>"Front-line" refers to units that are regularly staffed and are shown as available for dispatch in the Computer-Aided Dispatch System.

<sup>b</sup>A "quint" is a single vehicle that combines the capabilities of an engine and an aerial unit.

<sup>c</sup>911 calls come into the Police Emergency Communications Center (ECC), which serves as the County's Primary Public Safety Answering Point (PSAP). If the Police ECC cannot pick up within 30 seconds, the call is automatically transferred to the Fire-Rescue ECC as the Secondary PSAP. This process takes about 45 seconds, so it is virtually impossible for the Fire-Rescue ECC to answer a high percentage of those "unsorted" 911 calls within the one-minute COMAR standard (which was written primarily for the Primary PSAP). The FY03 actual - FY05 budget figures shown above include only "sorted" calls that were answered by the primary PSAP and quickly transferred to the Fire-Rescue ECC because the caller specified a need for fire/rescue services. The FY05 actual and FY06 approved projection includes all emergency calls (per the intent of the COMAR standard) - "sorted" calls and the longer hold-time "unsorted" calls - that are transferred from the Police ECC to the Fire-Rescue ECC.

This percentage fell because the new records management system altered the way in which the data are collected.

The FY05 fire loss was higher than anticipated due to eight incidents with high dollar losses that totaled \$21.7 million (averaging \$2.7 million each). Three of those fires each had losses greater than \$4 million. If these eight high loss fires are excluded, the total FY05 loss for all other fires comes to \$26.9 million.

#### PROGRAM:

Fire and Rescue Prevention and Public Education

PROGRAM ELEMENT:

#### PROGRAM MISSION:

To provide life safety education to children and adults in order to prevent or mitigate injuries and incidents

#### COMMUNITY OUTCOMES SUPPORTED:

- Protection of the lives and property of County residents and visitors through safety and prevention programs
- Promotion of a culture of preparedness and prevention within the County
- Improvement of the health, safety, and well-being of children and adults

PROGRAM MEASURES	FY02	FY03	FY04	FY05	FY05	FY06
Outcomes/Results:	ACTUAL	ACTUAL	ACTUAL	BUDGET	ACTUAL	APPROVED
Number of civilian fire deaths in structures	13	6	5	0	7	0
Total fire loss (\$000)	23,111	24,994	<sup>a</sup> 44,200	34,000	°48,638	34,500
Number of people reached with fire safety/injury prevention message <sup>b</sup>	450,000	500,000	200,000	100,000	100,000	100,000
Number of child car safety seats installed and adjusted <sup>c</sup>	450	500	600	300	638	400
Service Quality:						
Percentage of customers satisfied with:						
Safety in Our Neighborhood programs	NA	90	100	100	100	100
Risk Watch Injury Prevention program	100	100	100	100	100	100
Percentage of juvenile offenders completing Operation Extinguish	100	83	77	100	100	100
Efficiency:						
Cost per person reached with life safety information (\$)	0.72	0.71	1.78	3.60	3.60	4.31
Persons reached with life safety information per program workyear	214,286	238,095	95,238	48,780	48,780	26,316
Workload/Outputs:						
Number of homes approached for the Safety in Our Neighborhood Program	20,000	20,000	<sup>b</sup> 10,000	5,000	5,000	5,000
Number of home visits where personal contact was made	12,500	15,000	<sup>b</sup> 5,000	2,500	2,500	3,000
Number of smoke alarms and batteries installed during home visits	2,000	1,700	<sup>b</sup> 437	500	500	600
Number of home safety inspections conducted	200	400	<sup>b</sup> 200	50	50	50
Number of commercial building evacuation planning sessions	100	125	<sup>b</sup> 38	75	50	50
Number of schools participating in Risk Watch activities	42	50	52	55	55	58
Number of CERT classes offered <sup>d</sup>	0	1	3	3	2	4
Number of persons trained in CERT <sup>d</sup>	NA	30	60	70 ·	30	60
Number of juvenile offenders referred to Operation Extinguish	50	30	22	40	40	35
Number of juveniles completing Operation Extinguish	50	25	17	40	40	35
Number of File of Life senior safety prevention packets distributed <sup>e</sup>	5,000	10.000	10,000	12,000	9,000	15,000
Number of safety e-Newsletter subscribers <sup>e</sup>	1,000	1,200	1,500	2,000	1,800	2,000
Inputs:			.,,,,,,	2,000	1,000	2,000
Expenditures (\$000)	324	353	355	360	360	431
Workyears	2.1	2.1	2.1	2.1	2.1	3.8
Notes:					2.1	3.0

The FY04 and FY05 increases in fire loss resulted from a significant number of multi-million dollar structure fires, most notably the FY04 Trolley Museum fire which involved a \$10 million loss. The increased fire loss is also being fueled by higher residential property assessments, the aging of the County's housing stock, longer delays before calling 911, and the increase in (and aging of) the County's population.

The number of persons reached is computed from the total number of personal interactions, home visits, e-Newsletters distributed, handouts printed and distributed, persons attending events, etc. The downward trend after FY03 reflects pressures on the Fire and Rescue Service (FRS) budget. Historically, staffing support for community outreach has been supplemented by career fire and rescue staff working on overtime status. Budgetary constraints have resulted in the capping of overtime (which precludes the use of FRS personel in that capacity) and in the elimination of the publication budget for community outreach (printed literature is especially important when no personal contact is made and literature must be left at the door).

The figures for FY02 - FY04 are estimates due to incomplete reporting by those installing and adjusting car seats. An effective reporting mechanism was implemented in FY05. However, it is still not clear whether the installations and adjustments are being accurately entered at the stations.

This is modelled after the Federal Emergency Management Agency's CERT (Community Emergency Response Teams) program and involves training County residents to be better prepared for hazards that threaten their communities. Participants serve as community safety advocates and augment the response capability of the Fire and Rescue Service in the aftermath of a major disaster or emergency when first responders may be overwhelmed or unable to respond due to communication or transportation difficulties. It is totally grant funded.

The FY03 and FY04 budget cuts and cost savings plans led to a significant reduction in the printing and publication budget, with a corresponding reduction in printed materials available for distribution and a greater focus on web-based distribution of safety information.

#### EXPLANATION

The Fire and Rescue Service provides a variety of life safety educational services to the public, including Safety in Our Neighborhood (which involves home and community visits by station personnel), Risk Watch (a fire safety curriculum for children in grades K - 8 in partnership with the Montgomery County Public Schools), Learn to Be Safe (a child safety program addressing safe bicycling, safe swimming, pedestrian safety, and car occupancy safety), health care workshops, Operation Extinguish (which focuses on juvenile offenders who have been involved with fire-setting, fireworks, pipe bombs, and/or tripping fire alarms), and Business, Residential, School, and Institutional Safety Training (which includes assistance in developing fire evacuation procedures). The Car Safety Seat Program provides child safety seats to families and training on the proper installation and use of those seats. In addition, the County's local fire and rescue departments provide the public with information about fire prevention and develop programs to increase public awareness of fire prevention. These efforts - undertaken by personnel from local fire and rescue departments; the Montgomery County Public Schools; the departments of Health and Human Services, Public Libraries, and Housing and Community Affairs, as well as other organizations - are encouraged and facilitated by Fire and Rescue Prevention and Education staff, who design handouts, compose and publish the safety e-Newsletter, and provide training to these and other individuals and groups, while undertaking their own presentations and workshops to inform the public about fire and life safety.

PROGRAM PARTNERS IN SUPPORT OF OUTCOMES: local fire and rescue departments; area police departments; National SAFE KIDS Foundation; Department of Housing and Community Affairs; Department of Health and Human Services; Montgomery County Public Libraries; Montgomery County Public Schools; various private and home schools; local Chambers of Commerce; the insurance industry; Crysalis Group Inc.; Maryland Department of Juvenile Justice; Federal Emergency Management Agency; National Fire Protection Association.

MAJOR RELATED PLANS AND GUIDELINES: Fire, Rescue, and Emergency Medical Services Master Plan.

#### PROGRAM:

Operational Fire and Rescue Readiness and Response

## PROGRAM ELEMENT:

Field Staffing - Emergency Response to Fire-Rescue Incidents

## PROGRAM MISSION:

To provide timely and effective emergency medical and fire suppression services to protect citizens and property

#### COMMUNITY OUTCOMES SUPPORTED:

- Protection of the public in the event of incidents involving injury, cardiac or respiratory distress, bleeding, shock, acute illness, and other incidents requiring emergency medical services
- Protection of persons and property in the event of incidents involving fire, explosion, hazmat incidents, and related emergencies

PROGRAM MEASURES	FY02	FY03	FY04	FY05	FY05	FY06
	ACTUAL	<b>ACTUAL</b>	<b>ACTUAL</b>	BUDGET	<b>ACTUAL</b>	<b>APPROVED</b>
Outcomes/Results:						
Percentage of structure fires with flames confined to room of origin	76.6	78.8	75.1	78.8	<sup>d</sup> 52.8	77.3
Service Quality:			**:-	<u> </u>	<u> </u>	······································
Percentage of basic life support responses < 6 min. in Urban Area	72.0	75.4	59.0	58.5	66.0	68.8
Percentage of basic life support responses < 6 min. in Suburban Area	52.4	62.7	44.0			49.6
Percentage of basic life support responses < 6 min. in Rural Area	35.4	48.4	35.0		38.0	39.6
Percentage of advanced life support responses < 8 min. in Urban Area	96.2	84.7	71.0			78.2
Percentage of advanced life support responses < 8 min. in Suburban Area	89.2	76.8	59.0	82.0	61.4	74.8
Percentage of advanced life support responses < 8 min. in Rural Area	85.1	65.3	54.0	65.3	56.1	64.1
Percentage of fire responses < 6 min. in Urban Area	94.4	69.5	62.0	72.0	71.1	66.3
Percentage of fire responses < 6 min. in Suburban Area	83.1	44.1	36.0	47.2	44.2	41.0
Percentage of fire responses < 6 min. in Rural Area	87.5	39.2	28.0	31.3	31.2	35.4
Efficiency:				01.0	01.2	55.4
Patients treated per year per primary <sup>a</sup> emergency medical services unit	1,123	1,350	1,200	1,620	823	1,247
Average number of structure fires extinguished per front-line <sup>a</sup> engine or truck	12.3	11.8	11.1	14.3	12.5	11.2
Workload/Outputs:					<del></del>	
Number of responses to basic life support incidents	46,020	47,274	39,049	48,534	40,418	40,598
Number of responses to advanced life support incidents	24,800	25,445	35,620	26,616	30,894	32,588
Number of responses to structural fires	1,715	1,725	1,612	1,711	1,534	1,626
Number of responses to other incidents <sup>b</sup>	24,239	25,114	24,903	25,423	25,662	26,272
Total responses to incidents	96,774	99,558	101,184	102,284	98,508	101,084
Average number of incidents per day	265	273	277	280	270	276
Average number of unit responses per day	492	544	596	497	479	581
Number of patients treated	47,199	56,704	51,627	56,201	34,563	51,158
Number of patients transported	41,931	50,028	44,954	50,505	30,525	43,194
Inputs:						
Expenditures - emergency operations (\$000)	69,731	75,845	83,453	87,213	87,213	100,717
Career workyears	877.5	866.1	919.9	866.1	866.1	877.9
Response active volunteers <sup>c</sup> Notes:	506	379	392	481	442	448

#### ap..:...

#### **EXPLANATION:**

Response time is the elapsed time from the 911 call to arrival of Fire and Rescue Service units. During FY00, response time goals were established for urban, suburban, and rural areas, with goals being most stringent for the Urban Zone and least stringent for the Rural Zone. Response to emergency medical services and fire incidents is a product of cooperative efforts by both the career and volunteer elements of the Service to meet County Council-adopted response time goals.

**PROGRAM PARTNERS IN SUPPORT OF OUTCOMES:** Maryland Institute of Emergency Medical Services Systems, hospitals, mutual aid departments, State Fire Marshal's Office, Maryland Emergency Management Agency, Federal Emergency Management Agency, Bureau of Alcohol, Tobacco, Firearms, and Explosives.

MAJOR RELATED PLANS AND GUIDELINES: Fire, Rescue, and Emergency Medical Services Master Plan.

<sup>&</sup>lt;sup>a</sup>Primary and front-line units are units that are regularly staffed and are shown as available for dispatch in the Computer-Aided Dispatch System.

b"Other incidents" are non-structure fires and/or miscellaneous alarm calls (alarm bells, automatic fire alarms, automatic home fire alarms, etc.).

<sup>&</sup>lt;sup>c</sup>Volunteers who have responded to a sufficient number of annual incidents to earn 30 Length of Service Award Program points.

<sup>&</sup>lt;sup>d</sup>This percentage fell because the new records management system altered the way in which the data are collected.

PROGRAM:

Operational Fire and Rescue Readiness and Response

PROGRAM ELEMENT:

Fire and Rescue Communications

#### PROGRAM MISSION:

To ensure rapid and effective emergency assistance to Montgomery County's citizens, including its fire/rescue service and law enforcement agencies

#### COMMUNITY OUTCOMES SUPPORTED:

- Increase the survival rate for patients requiring Advanced Life Support (ALS) services
- Decrease fire loss
- · Decrease fire deaths and injuries

PROGRAM MEASURES <sup>a</sup>	FY02 ACTUAL	FY03 ACTUAL	FY04 ACTUAL	FY05 BUDGET	FY05 ACTUAL	FY06 APPROVED
Outcomes/Results:			NOTONE	BODGET	ACTOAL	AFFROVED
Percentage of calls for emergency service processed within 1 minute <sup>b</sup>	NA	52	48	65	1	5
Service Quality:	т. не					
Number of formal complaints investigated	NA	137	124	75	63	80
Percentage of transferred emergency calls answered within standard <sup>c</sup>	NA.	NA	NA.	25	25	25
Average time to process event, from receipt of call to dispatch (minutes:seconds)			,,,,	23	25	20
Emergency medical services events	NA	NA	NA	2:03	3:27	1:50
Fire events	NA	NA	NA	2:02	3:54	1:50
Efficiency:					0.04	1.50
Staff cost per 911 call received (\$)	NA	NA	NA	3.86	4.24	3.68
Staff cost per business call received or placed (\$)	NA	NA.	NA	3.27	3.91	3.43
Staff cost per 911 dispatch (\$)	NA	NA.	NA.	1.33	1.60	1.40
Total 911 calls per call-taking position per hour	NA	NA.	NA.	6.3	5.7	6.6
Total business calls received or placed per call-taking position per hour	NA	NA	NA.	7.4	6.2	8.0
Total phone calls (911 + business) per call-taking position per hour	NA	NA	NA.	13.7	12.0	14.6
Workload/Outputs:			101	10.7	12.0	14.0
911 calls received by the Fire and Rescue Emergency Communication Center queue <sup>d</sup>						
Fire queue	NA	NA	NA	48,984	42,908	51,433
Emergency medical services queue	NA	NA	NA.	86,225	83.392	90,536
Overflow 911 calls as the secondary Public Safety Answering Point	NA	NA	NA.	19,224	14,337	20,185
911 calls processed by Fire and Rescue Communications®				10,224	14,557	20,163
Advanced Life Support dispatches	NA	NA	NA	27,806	33,347	29,196
Basic Life Support dispatches	NA	NA	NA	47,219	44,598	49,579
Fire dispatches	NA	NA	NA NA	18,719	18,459	19,654
Other dispatches (hazmat, collapse, water, other specialized events)	NA	NA	NA	1,500	5,664	1,575
Alarm and system calls <sup>a</sup>	NA	NA	NA	4,607	16,283	4,837
Other administrative calls into 911 lines (no operational action required) <sup>h</sup>	NA	NA	NA	1,596	3,501	1,675
Total - all 911 event types	NA	NA	NA	101,447	121,852	106,516
Non-911 calls (incoming and outgoing) <sup>i</sup>	NA	NA	NA	365,430	305,022	340,000
TOTAL emergency and routine telephone calls handled	NA	NA	NA	519,863	445,659	502,154
Number of training hours provided for new personnel	NA	NA	NA	18,000	23,232	20,000
Number of in-service staff training hours provided	NA	14,976	22,680	15,000	4,760	6,500
Number of inter-agency tours and briefings	NA	NA	NA	10	22	25
Number of public tours and briefings	NA NA	36	26	45	39	50
Inputs:		-				
Expenditures (\$000)	3,463	3,753	4,846	<sup>h</sup> 5,877	<sup>h</sup> 5,877	5,986
Workyears	44.1	44.1	44.1	<sup>h</sup> 58.6	<sup>h</sup> 58.6	58.6
Number of available CAD (Computer-Aided Dispatch) positions	NA	9.0	9.0	9.0	9.0	9.0
Number of call-taker positions staffed	NA	NA	NA	2.8	2.8	2.8
Number of dispatch positions staffed	NA	NA	NA	2.8	2.8	2.8
Number of supervisor positions staffed  Notes:	NA NA	NA NA	NA NA	2.0	2.0	2.0

#### Notes

The new Communications Center involves techology and processes that differ significantly from the previous center. Because of the new technology, more accurate and relevant reporting methods have been implemented. Consequently, most data from prior years are not comparable and are not shown in this display.

bProcessing time is measured from receipt of the 911 call to the point at which the station or other personnel are alerted. Note that initially 911 calls come into the Police Emergency Communications Center (PECC), which serves as the County's primary Public Safety Answering Point (PSAP). The PSAP "sorts" the call by classifying it as police, fire, or emergency medical services (EMS) and directs it accordingly. If the Police ECC cannot pick up within 30 seconds, the call is automatically transferred to the Fire-Rescue ECC as the secondary PSAP, and the Fire-Rescue call taker completes the sorting. This process takes 45 seconds, so it is virtually impossible for the Fire-Rescue ECC in answer a high percentage of 911 calls within the one-minute COMAR standard (which was written mainly for the primary PSAP). The FY03 actual - FY05 budget figures shown above include only "sorted" calls that had been answered and transferred by the primary PSAP; the measured time referred to the time from transfer by the PSAP until the station was alerted. However, the FY05 actual and FY06 budget projection include all emergency calls (per the intent of the COMAR standard) - "sorted" calls and the longer hold-time "unsorted" calls - that are transferred from the Police ECC to the Fire-Rescue ECC. In addition, for FY06 processing time is measured from when the call comes into the Police ECC, not from when it was transferred to the Fire-Rescue ECC.

<sup>6</sup>The standard is ten seconds or two rings (COMAR 12.11.03.09). Because Fire-Rescue is the secondary PSAP, most 911 calls have already rung 45 seconds before being answered (see footnote b).
<sup>6</sup>The "queue" refers to fire and EMS calls that have been answered by the Police ECC, have been transferred to the Fire-Rescue ECC, and are waiting to be answered by the latter.

\*Excludes incoming cell phone calls and VoIP (internet) phone calls, which were estimated at 286,198 in FY04 and FY05. It is currently not possible to determine whether such calls were handled by Police or by Fire - Rescue communications personnel. (It is estimated that about 85% of such calls are handled by the Police Emergency Communication Center; all calculations herein are based on 15% of this

Includes all chemical, specialty team, undetermined, rescue, training, details (special assignments not available to take calls), and non-specific events.

<sup>9</sup>Includes all other routine and emergency events (system calls [e.g., notification that a system has been taken out of service], drills, etc.) which receive an event number, are entered into the Computer Assisted Dispatch (CAD) system, and require action.

hincludes only routine calls on 911 trunked phone lines of the Fire and Rescue component of the Emergency Communications Center that do not involve any type of administrative or public safety action. Includes all administrative telephone line phone calls, both incoming and outgoing, that are recorded by VESTA (see below), plus an estimate (92,250) for cellular and VoIP phone calls (see footnote e) and for administrative phone calls not recorded by VESTA (e.g., calls over direct lines to other stations, other municipalities, and the Police; hospital and utility company notifications; and business calls received (VESTA is a monitoring system that tracks conventional telephone line calls to each staff member and work area in the Emergency Communications Center; it cannot track administrative offices or unconventional telephone lines such as cell phones and VoIP.)

#### EXPLANATION

The Fire-Rescue Communication Center opened its doors on July 20, 2003. The new Center boasts the most technologically advanced facility in the region and is the epicenter for the County's fire, emergency medical services, police, traffic, and emergency management. In addition, the Fire and Rescue 911 Center acts as the secondary public safety answering point for Montgomery County. The Center provides emergency and non-emergency call-taking for all fire, rescue, and emergency medical service needs, with limited primary 911 service at all times and secondary 911 service when police resources are overwhelmed. Center staff provide emergency medical instructions to callers using Emergency Medical Dispatch (EMD) protocols to ensure appropriate medical care prior to the arrival of the responder. In addition to 911 support, the Center provides coordination and support to the County's Emergency Operations Center.

PROGRAM PARTNERS IN SUPPORT OF OUTCOMES: Police Emergency Communication Center, Montgomery County Department of Technology Services, Montgomery County Office of Emergency Management, Montgomery County Department of Homeland Security, Montgomery County Traffic Management Center, Verizon, Association of Public Safety Communications Officials, Maryland Emergency Management Association, Emergency Services Numbers Board, Northrup Grumman, Emergency Management Center, Emergency Operations Center, Motorola, Montgomery County Radio Shop.

MAJOR RELATED PLANS AND GUIDELINES: Fire and Rescue Commission Communication Manual; Emergency Medical Dispatch Protocols; Association of Public Safety Communications Officials Training Program; Code of Maryland Annotated Regulations (COMAR); standards and protocols issued by the National Fire Protection Association, Association of Public Safety Communication Officials, National Emergency Management Association, and Maryland Emergency Management Association; FIREHOUSE software; SafetyPad.

#### PROGRAM:

Special Operations

#### PROGRAM ELEMENT:

Fire and Explosive Investigations/Bomb Squad

## PROGRAM MISSION:

To identify hazards and dangerous products that cause accidental and incendiary fires, to safely mitigate explosive-related incidents, to identify and bring to justice those persons responsible for arson and explosive-related crimes, and to continue to provide fire/arson/explosive awareness training while working in partnership with the community to improve the quality of life within the County

## COMMUNITY OUTCOMES SUPPORTED:

- · Protection of lives and property of County residents, businesses, and visitors
- · Respect for the law
- An informed community concerning fire/arson/explosive awareness
- Responsive government
- Efficient and effective fire and rescue services

PROGRAM MEASURES	FY02 ACTUAL	FY03 ACTUAL	FY04 ACTUAL	FY05 BUDGET	FY05 ACTUAL	FY06 APPROVED
Outcomes/Results:				DODGE	AO TOAL	ALTROVED
Number of individuals arrested	63	79	36	34	35	38
Total estimated loss due to incendiary fires investigated (\$000)	3,425	2,474	2,467	2,890	2,533	2,981
Percentage of investigated incendiary dollar loss closed	59	21	21	24	23	2,301
Percentage of fires for which a cause was determined	87	87	86	88.5	88	88.5
Service Quality:				- 00.0		
Closure rate for criminal incidents <sup>a</sup> (%)	23.6	33.0	23.3	21.4	23.0	22.6
Average elapsed time on explosive incidents (hours) <sup>b</sup>	2.1	4.2	5.7	3.0	3.0	5.5
Percentage of investigators certified as Hazardous Devices Technicians <sup>c</sup>	80	90	90	90	100	95
Efficiency:	·	*	1,			
Average number of incidents investigated/mitigated per workyear <sup>c</sup> Percentage of time spent on:	98.7	65.4	58.5	59.5	68.8	58.3
Origin and cause investigation	23	19	20	20	20	20
Criminal investigation	14	20	25	20	23	26
Suspicious packages (explosive, chemical/biological)	21	10	20	15	15	22
Community outreach <sup>d</sup>	18	5	10	15	12	8
Administration (court time, meetings, training, report writing, etc.)	24	46	25	30	30	25
Workload/Outputs:						
Number of fire incidents investigated	376	349	397	377	342	362
Number of criminal incidents investigated	165	157	163	145.		141
Number of explosive-related incidents investigated	e647	305	188	223	157	241
Number of devices found and mitigated	17	36	17	40	16	22.5
Number of criminal cases closed	39	52	38	48	43	31
Inputs:	,		100	•		
Expenditures (\$000)	1,272	1,421	1,805	1,609	1,609	1,810
Workyears	12.6	13.6	13.4	13.4	13.4	13.4
Notes:				-		

#### Notes

#### **EXPLANATION:**

This program continues to have a closure rate for arson cases well above the national average of 16 - 18%. Emphasis is placed on investigating those incidents where a large loss has occurred or where witnesses and/or evidence are found on the scene. The program is also responsible for operating a Bomb Squad that responds to bomb/explosive-related incidents and all acts of terrorism. The program is responsible for conducting all fire and explosive criminal investigations. In addition, the program is strongly committed to providing proactive, community-based educational programs where citizen involvement is encouraged.

**PROGRAM PARTNERS IN SUPPORT OF OUTCOMES:** Bureau of Alcohol, Tobacco, Firearms, and Explosives; FBI; Montgomery County Hazardous Incident Response Team; Montgomery County Police; Montgomery County Department of Homeland Security; state and local law enforcement agencies; Fire Code Enforcement Section; local fire marshal offices; Montgomery County Public Schools; Consumer Product Safety Commission; State's Attorney; insurance industry; news media.

MAJOR RELATED PLANS AND GUIDELINES: Montgomery County Fire Safety Code, Maryland Criminal Procedures Article, Public Safety Article, National Fire Protection Association Standards 921 and 1033, Federal Explosive Laws.

<sup>&</sup>lt;sup>a</sup>Most criminal incidents involve arson or explosives.

<sup>&</sup>lt;sup>b</sup>From the time of notification of the incident until the incident has been mitigated. Changes in the responses to these incidents and in the procedures employed have contributed to an increase in average elapsed time over the years.

<sup>&</sup>lt;sup>c</sup>Based on a staff of 10 Fire/Explosive Investigators.

<sup>&</sup>lt;sup>d</sup>Arson awareness/prevention, bomb threat assessment, fire/injury prevention, bomb search procedure, juvenile fire setting intervention. There have been fewer requests for such programs, the longer it has been since 9/11.

<sup>&</sup>lt;sup>e</sup>A large increase in explosive-related incidents occurred following the September 11, 2001 terrorist attack and the anthrax incidents.

PROGRAM:

Special Operations

PROGRAM ELEMENT: Fire Code Enforcement

PROGRAM MISSION:

To provide a living and working environment free from fire and life safety hazards through enforcement of the Fire Safety Code

#### COMMUNITY OUTCOMES SUPPORTED:

- Protection of the lives and property of County citizens
- Responsive government

PROGRAM MEASURES	FY02 ACTUAL	FY03 ACTUAL	FY04 ACTUAL	FY05 BUDGET	FY05 ACTUAL	FY06 APPROVED
Outcomes/Results:			NOTOAL	DODGE	ACTUAL	AFFINOVED
Percentage of enforcement inspections with no fire code violations found <sup>a,h</sup>	NA	NA	NA	2	2	2
Total number of occupancies found to have fire code violations <sup>a,h</sup>	NA	NA	NA	20,600	20,600	20,600
Total violations found <sup>a,h</sup>	NA	NA	NA	61,800	- 61,800	61,800
Number of fires where a code violation affected the incident outcome <sup>a</sup>	NA	NA	NA	380	304	300
Number of referred hazmat facilities brought into compliance by Office of Fire	NA	NA	NA	90	88	10
Code Enforcement followup				•	00	10
Total square footage of commercial space approved for occupancy (100,000 sq. ft.) <sup>a</sup>	NA	NA	NA	TBD	NA	250
Percentage of total structural value damaged by fire in sprinklered buildings	NA	NA	NA	TBD	<sup>b</sup> 0.05	0.05
Percentage of total structural value damaged by fire in non-sprinklered buildings	NA	NA	NA	TBD	b2.7	2.7
Service Quality:		i				
Percentage of violations remedied within 30 days <sup>a</sup>	NA	NA	NA	50	50	50
Percentage of violations that result in the issuance of a civil citation <sup>a</sup>	NA	NA	NA	1	1	1
Percentage of inspector noted violations overturned on review <sup>a</sup>	NA	NA	NA	0	0	
Percentage of single-family inspections completed within 48 hours	NA	NA	NA	95	90	95
Percentage of commercial inspections completed within 7 working days	NA	40	20	80	75	15
Percentage of surveyed customers that rate service as satisfactory or better	99.5	<sup>9</sup> NA	gNA	95	<sup>9</sup> 95	95
Percentage of inspectors certified as NFPA Fire Inspector II <sup>d</sup>	90	90	80	100	85	100
Efficiency:						100
Average cost per inspection (\$)	NA	NA	99	130	103	120
Average number of inspections per inspector per day	NA	NA	7.1	7.8	k,m8.3	7.8
Average time per inspection (hours) <sup>a</sup>	NA	NA	NA	1.1	1.3	1.1
Average number of work hours per complex structure inspected <sup>a</sup>	NA	NA	NA	102	<sup>m</sup> 121	234
Average number of non-inspection customer contacts per staff day <sup>c</sup>	NA	NA	NA	. 29	47	31
Percentage of inspector time spent on: <sup>a</sup>				. 20	77	31
Inspections	92	86	65	75	75	80
Administration	8	14	<sup>1</sup> 35	25	75 25	20
Workload/Outputs:						
Number of enforcement inspections <sup>a</sup>	1,800	<sup>h</sup> 2.000	<sup>1</sup> 1,200	3,000	2.760	4,000
Number of new occupancy inspections <sup>a</sup>	2,600	<sup>h</sup> 3,000	4,720	4,500	5,120	4,500
Number of new construction inspections <sup>a</sup>	800	<sup>h</sup> 1,000	1,580	1,400	<sup>k</sup> 6.250	1,800
Number of permits and licenses inspections <sup>a</sup>	2,300	<sup>h</sup> 2,500	3,400	3,400	3,250	3,800
Number of systems inspections/tests <sup>a,e</sup>	3,856	<sup>h</sup> 4,000	k5,200	<sup>k</sup> 6,500	6,640	6,750
Number of permits issued <sup>c</sup>	NA	NA.	400	300	330	400
Number of non-inspection customer contacts <sup>c</sup>	NA	NA	62,700	122,000	196,000	130,000
Total training hours provided	311	300	816	340	430	400
Hours of continuing education provided for inspectors <sup>f</sup>	510	500	400	680	680	800
Inputs:	<del></del>					300
Expenditures (\$000)	1,071	1,241	<sup>k</sup> 1,599	<sup>k</sup> 2,451	2,406	2,509
Workyears	11.7	12.7	<sup>k</sup> 18.4	<sup>k</sup> 21.6	21.6	2,309
Notes:			10.4	21.0	21.0	۷۱.0

# <u>Notes:</u>

Reflects a significant increase in commercial construction and required inspections; resources have been redirected to meet the demand. Inspections are being scheduled 3-4 weeks in advance.

Beginning in FY04, time spent completing reports is included in Administration.

Reflects an increase in inspections from the residential sprinkler program that took effect in the last quarter of FY04 and the beginning of FY05. The high failure rate has severely impacted other programatic areas, resulting higher than expected overtime inspection demand.

The increase reflects 640 hours provided by the Maryland State Fire Marshall for code updates and required training for new inspectors to implement the residential sprinkler program. Does not include continuing education required to maintain Fire Inspector II certification.

This average increased due to the large service demand resulting from the Westfield Wheaton Plaza project and the subsequent overtime inspection demand.

#### EXPLANATION:

The Office of Fire Code Enforcement provides new construction and new occupancy inspections and system testing for all commercial and residential occupancies in the County to ensure compliance with applicable fire and life safety laws and code requirements prior to occupancy or opening for business. Service is provided on demand to allow the greatest degree of flexibility in meeting customer needs. Enforcement inspections are conducted in response to specific complaints received from other agencies, fire and rescue field units, and the general public.

PROGRAM PARTNERS IN SUPPORT OF OUTCOMES: Department of Permitting Services, Department of Environmental Protection, Department of Health and Human Services, Department of Economic Development, Department of Housing and Community Affairs, Maryland-National Capital Park and Planning Commission, Housing Opportunities Commission, Montgomery County Public Schools, Maryland State Fire Marshal, Maryland Child Care Administration, cities of Rockville and Gaithersburg.

MAJOR RELATED PLANS AND GUIDELINES: Montgomery County Fire Safety Code, National Fire Protection Association (NFPA) 101 and associated NFPA standards, Article 38A Fire Laws of Maryland.

The electronic reporting platform to capture this information accurately has been procured, but hardware problems have delayed implementation.

<sup>&</sup>lt;sup>b</sup>This figure reflects 9 months of data.

Chis is a new measure that is currently being refined. A tracking system has been implemented that more accurately reflects the number of customer contacts.

The State requires inspectors to be certified to level I. Montgomery County certifies to level II so that inspectors can evaluate more complex issues in the field.

Systems inspections/tests include the testing of fire alarms, sprinklers, standpipes, and other fire suppression devices.

Reflects continuing education hours required by the National Fire Protection Association to maintain Fire Inspector II certifications.

The customer survey was not conducted in FY03 and FY04. A survey mechanism was in place for FY05, but a limited number of surveys were returned.

hEstimated.

## PROGRAM:

Wellness, Safety, and Training

PROGRAM ELEMENT:

Fire, Rescue, and Emergency Medical Services Training

#### PROGRAM MISSION:

To provide, coordinate, and support the Fire and Rescue Service's current and projected training and educational initiatives in order to maintain or improve all aspects of organizational effectiveness and ensure a safe community

## COMMUNITY OUTCOMES SUPPORTED:

- · Protect the lives and property of County residents, businesses, and visitors
- Ensure the health and safety of fire and rescue personnel
- · Provide high value for tax dollars

PROGRAM MEASURES	FY02 ACTUAL	FY03 ACTUAL	FY04 ACTUAL	FY05 BUDGET	FY05	FY06 APPROVED
Outcome/Results:					AOT OAL	ALLITOVED
Number of firefighters trained	789	812	880	975	761	975
Number of Emergency Medical Technician - Basic providers trained	647		702			
(initial and recertification)	317	000	702	022	701	822
Number of Advanced Life Support <sup>a</sup> providers trained (initial and recertification)	361	359	374	375	403	400
Service Quality:						
Average student rating of instruction <sup>b</sup>	91	90	92	100	91	100
Percentage of enrollees completing the course	87	87	90		89	100
Efficiency:				100	- 09	100
Average cost per course offered (\$)	3,390	3,460	3,575	3,600	3,580	3,700
Average cost per hour of training provided (\$)	38	40	45	47	3,360 47	3,700 50
Average cost per student per day (\$)	130	139	146	153	149	158
Average class size	25	27	28	28	27	25
Courses offered per classroom	52	50	52	52	54	52 52
Workload/Outputs:				<u> </u>		52
Number of course offerings	130	134	134	145	152	155
Number of Standard Training Programs offered	36	36	36	36	36	36
Number of certified instructors	53	56	59	65	62	65,
Number of persons trained in Orientation classes	642	659	628	1,200	750	1,200
Number of Advanced Life Support <sup>a</sup> provider course sessions attended (initial and recertification)	1,389	1,402	1,424	1,440	1,430	1,413
Number of persons attending Command Development training course sessions	502	518	487	1,265	693	1,265
Command Officer Professional Development student hours	3,157	3,149	3,101	3,200	3.151	0.000
Hours of training provided	0,107	0,143	3,101	3,200	3,131	3,200
Orientation	6,450	6,134	8,000	8,000	7,926	9,000
Basic training (Essentials of Firefighting and EMT - Basic)	50,000	47,595	48,220	50,260	51,230	50,250
Annual recertification	11,724	11,724	11,800	11,800	11,950	11,850
Recertification (other than annual recertification)	9,642	9,702	9,900	9,900	9,775	10,200
Advanced Life Support training (basic and recertification) <sup>a</sup>	12,642	12,500	12,600	12,700	12,610	12,800
Career development training <sup>c</sup>	7,500	7,822	10,500	12,000	8,760	13,200
Inputs:	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.,	,	12,000	0,700	13,200
Expenditures (\$000)	2,859	2,859	2,378	<sup>d</sup> 4,302	4,302	6,074
Workyears	39.7	39.7	26.3	<sup>4</sup> ,302	50.3	· •
Notes:			20.0	50.3	50.3	*80.8

## Notes:

#### **EXPLANATION:**

Service readiness is maintained through basic training and recertifications. The Montgomery County Fire and Rescue Commission has established minimum training standards to be delivered to all career and volunteer personnel who staff fire and emergency medical services units. The Training Division is responsible for training all personnel to these standards.

PROGRAM PARTNERS IN SUPPORT OF OUTCOMES: Maryland Fire and Rescue Institute, National Registry of Emergency Medical Technicians, Maryland Institute of Emergency Medical Services Systems, Montgomery County Public Schools, Montgomery College - Rockville Campus, National Fire Academy.

MAJOR RELATED PLANS AND GUIDELINES: Maryland Occupational Safety and Health Administration, Maryland Fire and Rescue Institute class objectives, Maryland Institute of Emergency Medical Services Systems program standards, U.S. Department of Transportation, National Standard for Emergency Medical Technician - Basic Curriculum, Journal of the American Medical Association.

<sup>&</sup>lt;sup>a</sup>Cardiac Rescue Technician - Intermediate, and Emergency Medical Technician - Paramedic.

<sup>&</sup>lt;sup>b</sup>Data are from the Fire/Rescue Training Academy Post-Course Evaluation Form. This measure is an average of the overall course ratings provided by students for Fire/Rescue Training Academy courses taken during the fiscal year. The overall ratings combine assessments of five different aspects of each course: the facility, the instructor, visual materials, printed materials, and the course itself. Each student's overall rating is reported as a score of 0 to 100, with 100 being the best.

<sup>&</sup>lt;sup>c</sup>Command Officer Professional Development and Improvement, Weapons of Mass Destruction, National Incident Managment System training, in-service training, driver's test training, Water Rescue Incident Scene Command, etc.

The increases reflect the need to train additional recruit classes.

<sup>\*</sup>The increase is due to the expanded number of Recruit Training Schools per year.

## PROGRAM:

Wellness, Safety, and Training

PROGRAM ELEMENT:

Safety

#### PROGRAM MISSION:

To enhance the safety and welfare of career and volunteer personnel in the Fire and Rescue Services in order to reduce injuries, collisions, and workers' compensation claims and to ensure that all personnel and apparatus are available to respond to the needs of the County's citizens

#### COMMUNITY OUTCOMES SUPPORTED:

- · Protect the health and safety of Fire and Rescue personnel and the general public
- Ensure the readiness and availability of Fire and Rescue equipment and personnel to respond to emergency situations
- Provide high value for tax dollars

PROGRAM MEASURES	FY02	FY03	FY04	FY05	FY05	FY06
	ACTUAL	ACTUAL	ACTUAL	BUDGET	ACTUAL	APPROVED
Outcomes/Results:			-			A. I. HOULD
Number of fire fighter deaths	0	0	. 0	0	0	
Total number of fire fighter injuries (lost time plus medical only)	526	380	422	286	482	
Lost time injuries <sup>a</sup> (career staff)	262	185	134	155	216	
Lost time injuries <sup>a</sup> (volunteers)	38	30	153	<sup>9</sup> 1,2	19	
Medical only injuries (career staff)	153	112	100	75	197	
Medical only injuries (volunteers)	73	53	35	44	50	
Record-only injuries <sup>b</sup> (career staff)	132	106	125	88	127	
Record-only injuries <sup>b</sup> (volunteers)	38	29	23	15	13	
Number of injuries occurring at the scene of a fire	92	115	145	140		
Total number of vehicle collisions	161	129	145	150	113 106	
Vehicle collisions with over \$5,000 damage	5	6	8	6	4	
Vehicle collisions with injuries	5	6	12	12	4	. 4 8
Vehicle collisions while backing up <sup>c</sup>	7	6	11	5	3	
Number of stations found to have safety violations	20	14	12	10	5 5	_
Percentage of stations with no safety violations	50	68	80	85	50 50	8 90
Number of personal protective equipment violations found and corrected	175	150	125	115	100	100
Service Quality:					100	100
Percentage of station safety inspections conducted as scheduled						
- By the station/facility commander	30	32	34	41	20	41
- By Safety Section personnel	34	34	41	41	5	41
Percentage of personal protective equipment inspections conducted as scheduled		-		-,,	9	7'
- By the station/facility commander	23	26	34	41	41	41
- By Safety Section personnel	31	33	34	41	15	41
Number of SCBA <sup>d</sup> units repaired within 5 working days	95	124	175	198	700	200
Number of "significant event" investigations completed within 90 days	2	4	6	5	5	5
Efficiency:						
Program cost per fire fighter injury (excluding "record only" injuries) (\$)	1,800	1,900	2,000	2,500	1,662	1,344
Program cost per vehicle collision (\$)	1,500	1,700	1,900	2,500	2,182	3,591
Workload/Outputs:		1,700	1,000	2,500	2,102	3,391
Number of station safety inspections by Safety Section staff	39	40	34	41	<sup>ħ</sup> 5	
Number of personal protective equipment inspections by Safety Section staff	656	876	634			21
Number of SCBAs inspected <sup>d</sup> and flow tested	650	655		943	<sup>h</sup> 15	500
Number of SCBA repairs conducted	2,300		665	665	900	750
Number of collision reports reviewed	2,300 129	2,600 139	2,900	3,000	3,000	500
Number of injury investigation reports reviewed	2	139	145 4	150	106	135
Number of community fire safety briefings <sup>e</sup>	0	12	0	5 6	5	3
Inputs:			- 0	ь	6	6
Expenditures <sup>1</sup>	N: A	h	407.000	000 555		
Workyears¹	NA	NA	167,236	226,578	231,336	353,738
Notes:	NA_	NA_	2.0	2.0	2.0	2.0

#### Notes:

#### EXPLANATION:

Prior to July 2003, safety oversight was a collateral responsibility of an Assistant Chief. In August, 2003, four Shift Safety Captains were detailed from the Bureau of Operations to the Safety Office in order to implement the Safety Management Plan. However, the cost savings plan implemented in January 2004 resulted in the return of these officers to the Bureau of Operations. In November of 2005, two captains were detailed from the Operations Division to the Safety Office as fire safety officers. This brought the total to three fire safety officers, one for each shift. The Safety Office also manages the SCBA/Air Compressor Program and focuses on evaluating the performance and possible replacement of the present SCBA inventory.

PROGRAM PARTNERS IN SUPPORT OF OUTCOMES: Local fire and rescue departments; Montgomery County Police, Sheriff, and Correction and Rehabilitation Departments; Montgomery County Division of Risk Management; Fire-Rescue Training Academy; local, municipal, and county fire departments within the State; Maryland Occupational Safety and Health; National Fire Protection Association.

MAJOR RELATED PLANS AND GUIDELINES: Montgomery County Fire and Rescue Service Safety Management Plan, National Fire Protection Association Standard No. 1500 (safety standards), Federal Occupational Safety and Health Administration/Maryland Occupational Safety and Health Regulation 1910.134, Montgomery County Fire and Rescue Services internal rules, regulations, policies, and procedures.

<sup>&</sup>lt;sup>a</sup>These correspond to Workers Compensation Claims.

b"Record only" injuries are reported but involve neither lost time nor a need for medical consultation or care.

<sup>°</sup>These accidents are deemed highly preventable and are the focus of a major accident reduction initiative.

<sup>&</sup>lt;sup>d</sup>SCBA = Self-Contained Breathing Apparatus.

The Safety Office occasionally assists the Public Information Office with risk reduction presentations.

Prior to FY04, the resources associated with safety activities were not distinguished from other expenditures.

<sup>9</sup>This number is expected to decrease compared to FY01 - FY03 because of fewer volunteers participating in operations and the effectiveness of the safety program.

<sup>&</sup>lt;sup>h</sup>The number of safety inspections of gear and stations conducted by the Saftey Office staff was significantly reduced in FY05 due to the loss of the Safety Captain 24-hour shift positions. The latter positions will return for three months during the next budget cycle.